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APPEAL BRIEF

Applicant	:	Dean A. Klein
App. No.	:	10/666,184
Filed	:	September 17, 2003
For	:	BROADBAND CABLE TELEVISION AND COMPUTER NETWORK
Examiner	:	John R. Schnurr
Art Unit	:	2421

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Commissioner for Patents
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Sir:

In accordance with the Notice of Appeal filed July 6, 2009, Appellant submits this Appeal Brief. The Appellant appeals the rejection of pending Claims 1-51, which were rejected in the Final Office Action having a notification date of May 27, 2009.

This Appeal Brief is being filed in accordance with the rules of 37 C.F.R. § 41.37 and includes a Claims Appendix, an Evidence Appendix, and a Related Proceedings Appendix.

TABLE OF CONTENTS

I. REAL PARTY IN INTEREST

The real party in interest in the present application is Micron Technology, Inc.

II. RELATED APPEALS AND INTERFERENCES

None.

III. STATUS OF CLAIMS

Claims 1-51, as listed the Claim Appendix, remain pending and are the subject of this Appeal. Pending Claims 1-51 were rejected in the Final Office Action having a notification date of May 27, 2009, and are the subject of this appeal.

IV. STATUS OF AMENDMENTS

No amendments were made in response to the Final Office Action.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present application includes six independent claims. Each independent claim is paraphrased below, with citations to corresponding portions of the specification and drawings as required by 37 C.F.R. § 41.37(c)(1)(v). These citations are provided in order to illustrate specific examples and embodiments of the recited claim language, and not to limit the claims. Furthermore, a citation to a specific paragraph or appendix in the following claim summaries should be treated as a citation to all lines of that paragraph or appendix.

In addition, the paragraph numbers referenced herein are based on the paragraph numbering set forth in the published application – U.S. Publication No. 2004/0060072 A1.

Claims 1, 6, 13, 20, 34, and 42 are independent claims, however, before discussing each of the claims individually, Appellant has provided the following brief overview.

Brief Overview

The claims are directed to systems and methods that filter video signals on a coaxial cable to provide bandwidth for a local area network.

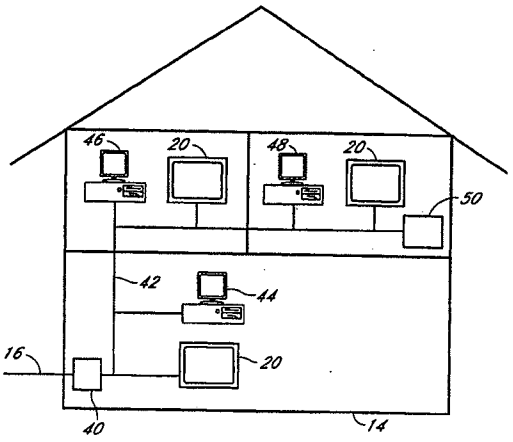

FIG.3

More particularly, as illustrated in Figure 3, a notch filter 40 is connected to coaxial cable 16. The notch filter 40 filters one or more bands of video signals received at the building 14.

Computing devices 44, 46, and 48 within the building then use the filtered band of video signals to communicate with each over the coaxial cable 42. Thus, the coaxial cable 42 is used for two purposes – 1) to transmit non-filtered video signals and 2) to transmit computer-to-computer communications within the filtered band of video signals.

Furthermore, the unique notch filter 40 prevents the transmission of the computer-to-computer communications from leaving the building 14. More particularly, the unique notch filter 40 prevents computer communications within the filtered band of video signals from exiting the building 14 and traveling upstream to a broadcaster on cable 16.

Thus, with certain embodiments of the invention, it is possible to utilize the on-premises cabling 42 to both receive video signals and to support local computer-to-computer communications while not interfering with the upstream communication path 24 (shown in Figure 1).

Independent Claim 1

An example of an embodiment related to Claim 1 is shown in Figures 1 and 3 of the patent application. Using this example, a network bus 18 comprises:

- a notch filter 40 (**see e.g., paragraph 0022 and Figure 3)** in communication with a coaxial cable 16, said coaxial cable 16 routed in a tree configuration to a plurality of locations of a building 14 (**see e.g., paragraph 0017 and Figure 3**), said notch filter 40 comprising a first port (**see e.g., paragraph 0022**) in communication with an external source 10 (**see e.g. paragraph 0016 and Figure 1**), said notch filter 40 configured to filter out one or more bands of video signals received on said first port from an external source that are carried by said coaxial cable 16, wherein said notch filter 40 further comprising a second port (**see e.g., paragraph 0022**) configured to receive via said coaxial cable, transmissions from a local area network of computers 44, 46 and 48 within said building 14 (**see e.g., paragraph 0023 and Figure 3**), said transmissions occurring at one or more frequencies within said filtered out bands of video signals such that said transmissions from said local area network occur at one or more frequencies as said filtered out bands of video signals, and wherein said notch filter 40 receives at said second port said transmissions over said coaxial cable within said building and allows said transmissions within said building while filtering said transmissions from being sent from said local area network to said external source; and
- a frequency converter 50 (**see e.g., paragraph 0026 and Figure 3**), in communication with said coaxial cable 16, configured to receive transmissions from said local area network of computers 44, 46 and 48 at at least a first frequency and to send said signals within said tree

configuration to said local area network of computers at at least a second frequency, wherein said first and second frequencies are within said filtered out bands of video signals such that said local area network of computers 44, 46 and 48 (**see e.g., paragraph 0023 and Figure 3**) can send and receive signals within said filtered out band of video signals on said coaxial cable 16 in communication of said second port of said notch filter 40 while said notch filter 40 blocks said transmissions on said local area network 44, 46 and 48 from exiting said building 14 (**see e.g., paragraph 0022**).

Independent Claim 6

An example of an embodiment related to Claim 6 is shown in Figures 1 and 3 of the patent application. Using this example, a local area computer network 18 comprises:

- a notch filter 40 comprising a first port (**see e.g., paragraph 0022 and Figure 3**) configured to receive a signal from a cable television transmission system 10 (**see e.g. paragraph 0016 and Figure 1**) and to filter out at least one portion of said signal in the range of approximately 50 MHz to approximately 750 MHz to produce a filtered signal (**see e.g., paragraph 0022**);
- a community antenna television wire 16 (**see e.g., paragraph 0022**) configured to receive said filtered signal and routed in a tree configuration to a plurality of locations of a residence 14, said wire 16 in communication with a second port of said notch filter 40;
- a plurality of computers 44, 46, and 48 (**see e.g., paragraph 0026 and Figure 3**) in communication with said wire 16, each of said computers 44, 46 and 48 having a modem 74 **(see e.g. paragraph 0032 and**

Figure 5) configured to receive and transmit broadband signals between said computers 44, 46 and 48 within said tree configuration;

- wherein said computers 44, 46, and 48 are configured to send and receive communications between different ones of said computers 44, 46 and 48 via said modems 74 **(see e.g. paragraph 0032 and Figure 5)** by modulating a carrier having a frequency within said filtered out portion and wherein said notch filter 40 receives said communications between said different ones of said computers 44, 46, and 48 at said second port and allows said communications to occur while filtering through said second port said communications between said computers from being transmitted out of said residence 14 (**see e.g., paragraph 0022**).

Independent Claim 13

An example of an embodiment related to Claim 6 is shown in Figures 1 and 3 of the patent application. Using this example, a method of making a local area network comprises:

- routing community antenna television wiring 16 (**see e.g., paragraph 0022**) in a tree configuration to different parts of a structure 14;
- coupling a notch filter 40 (**see e.g., paragraph 0022 and Figure 3**) comprising a first port to said wiring for filtering out one or more bands of frequencies associated with one or more television broadcasts delivered to said wiring 16 by a service drop of a community antenna television distribution system 10 (**see e.g. paragraph 0016 and Figure 1**);
- coupling to said notch filter 40 via a second port (**see e.g., paragraph 0022)** a plurality of computing devices 44, 46 and 48; and

- configuring at least some of said computing devices 44, 46, and 48 for two-way communication with others of said computing devices 44, 46, and 48, wherein the two-way communication is connected to said second port of said notch filter 40 and occurs at least one frequency within said filtered out bands of television broadcasts (**see e.g., paragraph 0022**) such that said computing devices 44, 46, and 48 can send and receive signals within said filtered out bands of television broadcasts while connected to said second port and wherein said notch filter 40 allows said transmissions over said wiring within said structure while filtering said communications between said computing devices from being transmitted out of said structure 14 (**see e.g., paragraph 0022**).

Independent Claim 20

An example of an embodiment related to Claim 6 is shown in Figures 1 and 3 of the patent application. Using this example, a method networking computing devices, comprises:

- coupling a notch filter 40 (**see e.g., paragraph 0022 and Figure 3**) comprising a first port to coaxial wiring 16 carrying television signals, wherein the coaxial wiring 16 is routed in a tree configuration to a plurality of locations in a building 14;
- filtering out a frequency band (**see e.g., paragraph 0022**) comprising a portion of said television signals with the notch filter 40; and
- establishing two-way communications **(see e.g., paragraph 0025)** between at least two computing devices 44, 46, and 48 within the building 14 and connected via the tree configuration, wherein said two-way communications are coupled to a second port of said notch filter 40, wherein said communications are carried at least in part over said coaxial

wiring 16 utilizing said filtered out frequency band such that said computing devices 44, 46 and 48 can send and receive signals within said filtered out frequency band on said coaxial wiring 16 while coupled to said second port, and wherein said notch filter 40 allows said transmissions over said coaxial wiring 16 within said building while filtering said communications between said computing devices from being transmitted out of said building (**see e.g., paragraph 0022**).

Independent Claim 34

An example of an embodiment related to Claim 6 is shown in Figures 1 and 3 of the patent application. Using this example, a network device comprises:

- a receiver 20 for receiving a television signal from a community antenna television system 16 (**see e.g., paragraph 0017**);
- a transmitter 20 for transmitting signals to a headend equipment of said community antenna television system 16 (**see e.g., paragraph 0023**);
- a notch filter 40 in communication with said television signal via a first port, said notch filter 40 configured to block at least one stop frequency band within the received television signal (**see e.g., paragraph 0022 and Figure 3**); and
- a modem 74 **(see e.g. paragraph 0032 and Figure 5)** in communication with a second port of said notch filter 40, said modem 74 configured to receive and transmit broadband signals between computing devices 44, 46, and 48 within the at least one stop band and wherein the notch filter 40 is configured to allow transmission of said broadband signals between said computing devices 44, 46 and 48 while blocking the transmission of said broadband signals between said

computing devices from being sent to the headend equipment 10 at least within the at least one stop band (**see e.g., paragraph 0022**).

Independent Claim 34

An example of an embodiment related to Claim 6 is shown in Figures 1 and 3 of the patent application. Using this example, a method of communicating data between computing devices comprises:

- receiving a television signal from a headend transmission equipment 10 of a cable television transmission system (**see e.g., paragraph 0023**);
- filtering out with a notch filter 40 connected vi a first port to said television signal to filter a portion of said television signal in the range of approximately 50 MHz to approximately 750 MHz to produce a filtered signal (**see e.g., paragraph 0022 and Figure 3**);
- coupling said filtered signal to unlooped cable television wiring 42 (**see e.g., paragraph 0022 and Figure 3**) that is in communication with a second port of said notch filter 40;
- coupling a plurality of computing devices 44, 46 and 48 to said cable television wiring 42, wherein each of at least some of said computing devices 44, 46 and 48 comprises a modem 74 configured to receive and transmit broadband signals between said computing devices 44, 46 and 48 **(see e.g. paragraph 0032 and Figure 5)**;
- establishing communications, at least in part over said cable television wiring 42, between different ones of said computing devices 44, 46 and 48 via said modem 74 using at least one frequency within said filtered out portion **(see e.g., paragraph 0025)**; and

- allowing said communications over said cable television wiring 42 between said different ones of said computing devices 44, 46 and 48 while filtering with said notch filter 40 said communications between said computing devices 44, 46 and 48 so as to prevent transmission of said communications to said headend transmission equipment 10 (**see e.g., paragraph 0022**).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The rejection of Claims 1-5 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,288,749 to Freadman (hereinafter "Freadman"), in view of U.S. Patent No. 6,195,530 to Smith, et al. (hereinafter "Smith"), in view of U.S. Patent No. 6,009,465 to Decker, et al. (hereinafter "Decker"), and further in view of U.S. Patent No. 5,742,713 to Sanders, et al. (hereinafter "Sanders").

The rejection of Claims 6-9 and 12 under 35 U.S.C. §103(a) as being unpatentable over Freadman in view of Smith, and further in view of Sanders.

The rejection of Claims 13-33 and 42-51 under 35 U.S.C. §103(a) as being unpatentable over Freadman in view of Decker, and further in view of Sanders.

The rejection of Claims 34, 35 and 38-41 under 35 U.S.C. §103(a) as being unpatentable over Freadman in view of Smith, in view of U.S. Patent No. 5,760,822 to Coutinho (hereinafter "Coutinho") and further in view of Sanders.

The rejection of Claims 10 and 11 under 35 U.S.C. §103(a) as being unpatentable over Freadman in view of Smith, in view of Sanders, as applied to Claim 9, and further in view of U.S. Patent No. 6,738,978 to Hendricks, et al. (hereinafter "Hendricks").

The rejection of Claims 36 and 37 under 35 U.S.C. §103(a) as being unpatentable over Freadman in view of Coutinho, and further in view of Sanders, as applied to Claim 34, and further in view of Hendricks.

For purposes of this appeal, Appellant will treat Freadman, Smith, Decker, Sanders, Coutinho and Hendricks as prior art. Appellant, however, reserves the right to later disqualify one or more of these references as prior art. Also, to the extent that Appellant declines to present arguments herein with respect to some of the pending dependent claims, Appellant does not imply that the limitations added by such dependent claims are disclosed or suggested by the references relied upon in the Final Office Action.

VII. ARGUMENT

A. Rejection of Claims 1-5 under 35 U.S.C. §103(a)

The Examiner in the Final Office Action rejected Claims 1-5 under 35 U.S.C. §103(a) as being unpatentable over Freadman, in view of Smith, in view of Decker, and further in view of Sanders.

1. Brief Overview of the Cited References

Freadman

U.S. Patent No. 6,288,749 to Freadman (hereinafter "Freadman") describes a cable television system that connects a user's computer to a nearby television set. The video output by the computer is then displayed on one of the channels of the nearby television set. See Col. 3, lines 20-34 of Freadman.

Freadman uses a notch filter to filter out one of the cable channels in the television cable system. The user's computer in Freadman then broadcasts video on this filtered channel. See Col. 3, lines 49-62 of Freadman.

For example, if the user desires to see the video from his computer on channel "3" of his television set, the notch filter is set to filter channel "3" and the user's computer is then set to broadcast its video on channel "3". As a result, the television receives on channel "3" the video broadcast by the user's computer.

While Freadman discloses a notch filter and refers to a local network between the computer and the television set, the system in Freadman does not create a local area network of computers that both send and receive data with each other within the filtered video channel.

Rather, Freadman only substitutes one video channel for another, by filtering out a video channel and then substituting in a video channel generated by a user's computer. Thus, the computer in Freadman simply broadcasts video data in one direction – downstream to the television set or another computer.

So how does a user control the computer that broadcasts the video on the filtered channel? A user uses a separate RF pointer or keyboard to control the computer. See Col. 4, lines 1-15 of Freadman.

That is, in Freadman, the broadcast computer that broadcasts the video does not receive signals from the television set or from another computer over the filtered channel. Any communications sent to the broadcast computer are performed on a separate data link.

Therefore, Freadman fails to teach both sending and receiving computer-to-computer communications over one or more filtered band of video signals. Accordingly, Freadman fails to teach the use of a local area network of computers that both send and receive signals within a filtered video channel.

Smith

U.S. Patent No. 6,195,530 to Smith, et al. (hereinafter "Smith") describes a two-way interactive cable television system. With the system described in Smith, a person in a hotel room can select a particular movie to watch on an in-room television set. To accomplish this, the system in Smith describes a local area network of computers that communicate with each other. For example, the interactive terminal in the user's room and a transmitter/receiver bidirectionally communicate with each other. See Col. 4, lines 36-58 of Smith.

The local area network described in Smith, a transmitter/receiver 10 sends data downstream to the terminals during a vertical blanking period in the video broadcast. In another embodiment, the transmitter/receiver 10 sends data downstream on a separate data channel. See Col. 4, lines 36-58 of Smith.

The interactive terminals 7, 8 and 9 in Smith, on the other hand, communicates upstream to the transmitter/receiver 10 with a separate data channel operating at 25 MHz or a separate telephone line. See Col. 4, lines 36-58 of Smith.

Thus, while one may construe Smith to teach the downstream sending of signals from the transmitter/receiver 10 to the terminals 7, 8, and 9 over a video signal, Smith fails to teach receiving at the transmitter/receiver 10 information from the terminals 7, 8, and 9 over a video signal. That is, the transmission of information over the video signal in Smith is one way – downstream. Transmission of upstream signals occurs over a non-video channel operating at 25 MHz.

Thus, the system in Smith, like Freadman, does not both send and receive computer-to-computer communications within filtered out bands of video signals. Even when Smith is combined with Freadman, the combination fails to teach sending and receiving computer-to-computer communications over a band of filtered video signals. Indeed, Smith does not filter a band of video signals whatsoever.

Decker

U.S. Patent No. 6,009,465 to Decker, et al. (hereinafter "Decker") describes a hotel entertainment system that uses notch filters to filter out channels 2, 3 and 4 so that the hotel can broadcast desired information on these channels. A device in each hotel room then displays the desired hotel information on an in-room television set. When a user makes an entertainment selection, the device in the

hotel room communicates with a system controller via a telephone connection.

That is, the devices in each hotel room do not communicate with each other or a central controller using a band of filtered video signals. Rather, they communicate with separate telephone lines. See Col. 9, lines 20-39 of Decker.

Like Freadman and Smith, Decker also does not transmit two-way computer communications over a filtered band of video signals. Indeed, Decker doesn't send any computer-to-computer messages over a filtered band of video signals.

Sanders

U.S. Patent No. 5,742,713 to Sanders, et al. (hereinafter "Sanders") describes a system that identifies the source of external noise in a bi-directional cable system. Sanders teaches that cables often receive accidental leakage of external radio frequency noise from external sources. This external radio frequency noise is called "ingress" noise. See Col. 1, lines 21-25 of Sanders.

Sanders identifies the location of this ingress noise by using switching notch filters to selectively isolate different locations. That is, by isolating each location one at a time, a person can identify when the noise ceases and thereby determine the location of the noise. See Col. 3, lines 1-13 of Sanders.

Thus, the system of Sanders is not attempting to filter information purposely transmitted on the cable system, but instead identify noise that is received from sources outside the cable system. Still further, Sanders is not attempting to block local area network communications that are purposely transmitted within a filtered band of video signals. That is, the local network communications are not "ingress noise" caused by accidental leakage of external signals onto the transmission cable

2. Claim 1 Is Patentable In Light of the Cited References

The network bus of Claim 1 differs from the cited references for at least the following reasons:

a) a unique local area network of computers that both send and receive data within one or more filtered bands of video signals;

b) a novel frequency converter that receives signals from the local area network at a first frequency and sends signals at a second frequency, wherein both frequencies are within the filtered band of video signals;

c) a novel notch filter with two ports that not only filters out video signals from entering into a building, but also filters out local area network communications between different computers from leaving the building; and

d) a novel notch filter that that allows transmission of local area network signals.

Each of these differences is discussed in greater detail below.

a) A Unique Local Area Network Of Computers That Both Send And Receive Data Within One Or More Filtered Bands Of Video Signals

Claim 1 is directed to a network bus that comprises a notch filter on a coaxial cable to create a local area network. More particularly, as illustrated in Figure 3, a notch filter 40 is connected to coaxial wiring 16 that transmits video signals to locations within a building 14. The notch filter 40 filters out one or more bands of video signals received on the coaxial cable 16 at the building 14.

Computing devices 44, 46, and 48 within the building 14 then use the one or more filtered bands of video signals to send and receive signals over a local area

network. The sending and receiving of signals over the local area network occur within the filtered out bands of video signals.

Thus, the coaxial cable 42 is used for two purposes – 1) to transmit non-filtered video and 2) to send and receive computer-to-computer communications within the filtered out band of video signals.

None of the references, in contrast, teach sending and receiving computer communications over filtered bands of video signals.

The Examiner states that Freadman teaches this concept at Col. 3, lines 36-48 and Col. 4, lines 22-30. Appellant, however, respectfully disagrees.

Freadman only substitutes one video channel for another, by filtering out a video channel and then substituting in a video channel generated by a user's computer. Thus, the computer in Freadman simply broadcasts video data in one direction – downstream to the television set or another computer.

So how does a user control the computer that broadcasts the video on the filtered channel? A user uses a separate RF pointer or keyboard to control the computer.

That is, in Freadman, the broadcast computer that broadcasts the video does not receive signals from the television set or from another computer over the filtered channel. Any communications received from the television set are sent to the broadcast computer on a separate data link.

Therefore, Freadman fails to teach sending and receiving computer-to-computer communications over one or more filtered bands of video signals. Accordingly, Freadman fails to teach the use of a local area network of computers that both send and receive signals within a filtered video signal.

The system described in Smith, in contrast, does not filter any video signals whatsoever. Smith, however, does describe a local area network of computers

that communicate with each other. For example, the interactive terminals 7, 8 and 9 in the user's room bidirectinally communicate with a transmitter/receiver 10.

The local area network described in Smith, however, does not use a filtered portion of the cable broadcast to send the bidirectional data between the terminals 7, 8 and 9 and the transmitter/receiver 10. Rather, the transmitter/receiver 10 sends data downstream to the terminals 7, 8 and 9 during a vertical blanking period in the video broadcast. In another embodiment, the the transmitter/receiver 10 sends data downstream on a separate data channel. See Col. 4, lines 36-58 of Smith.

The interactive terminals 7, 9 and 9 in Smith, on the other hand, communicate upstream to the transmitter/receiver 10 with a separate data channel at 25 MHz or a separate telephone line. See Col. 4, lines 36-58 of Smith.

As explained in the background portion of Appellant's patent application, cable video channels are transmitted in the 50 to 750 MHz range, while telephone and other two-communications occur in the 5-42 MHz range. Smith teaches using a well known non-video channel operating at 25 MHz for upstream communications from the in-room terminals 7, 8 and 9 to transmitter/receiver 10.

Thus, while one may construe Smith to teach the downstream sending of signals from the transmitter/receiver 10 to the terminals 7, 8, and 9 over a video signal; Smith fails to teach receiving information from the terminals over a video signal. That is, the transmission of information over the video signal in Smith is one way – downstream. Transmission of upstream signals occurs over a non-video channel operating at 25 MHz.

One my argue that Smith teaches a second local area network between the transmitter/receiver 10 and the system manager 12. Figure 1, however, illustrates that modem are used for direct communications between transmitter/receiver 10 and system manager 12, not the video channels.

Thus, neither Smith nor Freadman, even when combined, teach the both sending and receiving computer-to-computer communications within filtered out bands of video signals.

Decker describes a hotel entertainment system that uses notch filters to filter out channels 2, 3 and 4 so that the hotel can broadcast desired information on these channels. A device in each hotel room then displays the desired hotel information on an in-room television set.

The devices in each hotel room, however, do not communicate with each other or a central controller using a band of filtered video signals. Rather, they communicate with separate telephone lines.

Like Freadman and Smith, Decker also does not transmit two-way computer communications over a filtered band of video signals. Indeed, Decker doesn't send any computer-to-computer messages over a filtered band of video signals.

Sanders describes a system that identifies the source of external noise in a bi-directional cable system. Sanders, however, does not describe computer networking within a filtered range of video signals.

Thus, none of the cited references, either alone or in combination teach a unique local area network of computers that both send and receive data within one or more filtered bands of video signals.

b) <u>A Novel Frequency Converter That Transmits Signals Within A Filtered Band</u>

Claim 1 is directed to a novel frequency converter, in communication with the coaxial cable. that is configured to receive transmissions from the local area network at a first frequency and to send the signals at a second frequency.

The frequency converter receives the local area network communications at a first frequency within the filtered out band of video frequencies. Furthermore, the

frequency converter of Claim 1 sends local area network communications at a second frequency within the filtered out bands of video signals.

The Examiner states on page 3 of the Final Office Action that "Smith (US 6,195,350) teaches a frequency converter receiving local area network signals at a first frequency and transmitting the signals at a second frequency."

Appellant respectfully notes that while Smith has a local area network that sends and receives signals at different frequencies, the different frequencies do not occur within the filtered out band of video signals. As explained above, the receiving of signals at the transmitter/receiver 10 in Smith from the terminals 7, 8, 9 does not occur on a video signal, let alone a filtered out video signal.

Thus, none of the cited references, either alone or combination, describe that a unique frequency converter of Claim 1 both sends and receives local area network communications within the filtered out bands of video signals.

c) A Novel Notch Filter That Filters Both Incoming Signals and Outgoing Signals

The notch filter of Claim 1 has a first port that receives video signals and a second port that that receives transmissions from a local area network. The notch filter filters certain bands of video signals from coming into a building while also filtering local area network communications from exiting the building.

In particular, a notch filter in communication with a coaxial cable, filters out one or more bands of video signals from an external source that are carried by the coaxial cable.

Although the local area network is in communication with the second port of the notch filter, the notch filter allows the local area network transmissions to occur over the coaxial cable within the building while filtering the transmissions

from leaving the building, such that the local area network communications are not transmitted out of the building.

In contrast, neither Freadman, Smith, Decker, nor Sanders, either alone or in combination describe such a notch filter that filters both incoming video signals and outgoing local area network signals. While Sanders describes filtering signals to prevent the upstream transmission of signals, no teaching exists whatsoever to adapt the filter in Sanders to be a two-way filter.

Also, even if one were to take the circuit described in Sanders and add it the combination of references described by the other cited references, the combination would not achieve the two-way filtering as set forth in Claim 1. Rather, Sanders would only provide a one-way filter that blocks upstream communications.

Thus, the cited references fail to teach the concept of a notch filter with first and second ports that performs the downstream filtering of video signals and upstream filtering of local area network signals.

d) A Novel Notch Filter That Allows Transmission of Local Area Network Signals

The notch filter in Claim 1 does three things: 1) it filters incoming video signals, 2) it filters outgoing local area network signals, while 3) allowing the transmission of the local area network signals within the building. Thus, the references need to teach a circuit that both filters incoming and outgoing signals while allowing the transmission of the signals within the filtered signal range to occur over a local area network. None of the cited references, however, teach this concept.

For example, Claim 1 states that the transmissions from the local area network occur at one or more frequencies as the filtered out bands of video signals. In addition, Claim 1 states that the local area network of computers can

send and receive signals within the filtered out band of video signals on the coaxial cable in communication of the second port of the notch filter while the notch filter blocks the transmissions on the local area network from exiting the building.

In contrast, none of the cited references describe the use of such a notch filter that allows the ongoing operation of the local area network in the very band of frequencies the notch filter has blocked from entering into the building. Still further, none of the cited references describe a notch filter that filters such local area network transmission via a second port from leaving the building.

3. The Examiner Has Not Presented a Prima Facie Case of Obviousness

The case, KSR International Co. v. Teleflex Inc., 127 S.Ct. 1727, 82 U.S.P.Q.2d 1385 (2007), in no way relieves the Patent Office of its obligation to "consider ***all claim limitations*** when determining patentability of an invention over the prior art." In re Lowry, 32 F.3d 1579, 1582 (Fed. Cir. 1994) (emphasis added). Accordingly, it remains well settled law that a finding of "obviousness requires a suggestion of ***all limitations in a claim***." CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (emphasis added) (cited in Ex Parte Wada, 2008 WL 142652, *4 (Bd.Pat.App. & Interf., Jan. 14, 2008)).

In the aftermath of KSR, the Board of Patent Appeals and Interferences has repeatedly reversed findings of obviousness when the Examiner has failed to proffer a prima facie case of obviousness. See, e.g., Wada, 2008 WL 142652 at *5 ("Because the Examiner has not explained why ***every limitation*** in claim 1 would have been obvious to a person of ordinary skill in the art, we agree with Appellants that the Examiner has not made out a case of prima facie obviousness.") (emphasis added); Ex Parte Challapali, 2008 WL 111346, *4-6 (Bd.Pat.App. & Interf., Jan. 10, 2008) (reversing finding of obviousness because

the Examiner failed to establish sufficient reasoning for combining the references).

In view of the arguments set forth herein, Appellant submits that Claim 1 is patentable over the cited references based on at least the following elements:

a) a unique local area network of computers that both send and receive data within one or more filtered bands of video signals;

b) a novel frequency converter that receives signals from the local area network at a first frequency and sends signals at a second frequency, wherein both frequencies are within the filtered band of video signals;

c) a novel notch filter with two ports that not only filters out video signals from entering into a building, but also filters out local area network communications between different computers from leaving the building; and

d) a novel notch filter that that allows transmission of local area network signals.

Thus, in order to establish a prima facie case of obviousness for the pending claims, the Examiner must present, inter alia, references that when combined have each and every claim limitation. However, none of cited references even when combined suggests such limitations. Thus, Appellant respectfully contends that the Examiner has failed to provide adequate articulation of reasoning to support the legal conclusion of obviousness.

Accordingly, Applicant respectfully requests allowance of Claim 1.

4. Dependent Claims 2-4

Claims 2-5 depend from independent Claim 1 and are not obvious over the cited references for at least the same reasons as provided above for Claim 1.

B. Rejection of Claims 6-9 and 12 under 35 U.S.C. §103(a)

In the Final Office Action, the Examiner rejected Claims 6-9 and 12 under 35 U.S.C. §103(a) as being unpatentable over Freadman in view of Smith, and further in view of Sanders.

1. Claim 6 Is Patentable In Light of the Cited References

The network bus of Claim 1 differs from the cited references for at least the following reasons:

a) computers that both send and receive data within a filtered portion of a signal that ranges from approximately 50 MHz to 750 MHz;

b) a novel notch filter with two ports that not only filters out video signals from entering into a building, but also filters out local area network communications between different computers from leaving the building; and

c) a novel notch filter that that allows transmission of local area network signals.

Each of these differences is discussed in greater detail below.

a) Computers That Both Send And Receive Data Within One Or More Filtered Bands Of Video Signals

Claim 6 is directed to a local area computer network that comprises a notch filter. More particularly, as illustrated in Figure 3, a notch filter 40 is connected to wiring 16 that transmits a signal to residence 14.

The notch filter 40 filters out one or more bands of signals in the range of approximately 50 MHz to approximately 750 MHz to produce a filtered signal.

Computing devices 44, 46, and 48 within the building send and receive communications within the filtered out portion of the signal in the range of approximately 50 MHz to approximately 750 MHz.

Thus, the wire 42 in the residence is used for two purposes – 1) to transmit the non-filtered portion of the signal and 2) to send and receive computer-to-computer communications within the filtered out portion of the signal.

None of the references, in contrast, teach sending and receiving computer communications over a filtered portion of signals in the range of approximately 50 MHz to approximately 750 MHz.

The Examiner states that Freadman teaches this concept at Col. 3, lines 36-48 and Col. 4, lines 22-30. Appellant, however, respectfully disagrees.

Rather, Freadman only substitutes one video channel for another, by filtering out a video channel and then substituting in a video channel generated by a user's computer. Thus, the computer in Freadman simply broadcasts video data in one direction – downstream to the television set or another computer.

So how does a user control the computer that broadcasts the video on the filtered channel? A user uses a separate RF pointer or keyboard to control the computer.

That is, in Freadman, the broadcast computer that broadcasts the video does not receive signals from the television set or from another computer over the filtered channel. Any communications received from the television set are sent to the broadcast computer on a separate data link.

Therefore, Freadman fails to teach both sending and receiving computer-to-computer communications over a filtered portion of a signal in the range of approximately 50 MHz to approximately 750 MHz. Accordingly, Freadman fails to

teach the use of a local area network of computers that both send and receive signals within a filtered signal.

The system described in Smith, in contrast, does not filter any video signals whatsoever. Smith, however, does describe a local area network of computers that communicate with each other. For example, the interactive terminals 7, 8 and 9 in the user's room bidirectionally communicate with a transmitter/receiver 10.

The local area network described in Smith, however, does not use a filtered portion of the cable broadcast to send the bidirectional data between the terminals 7, 8 and 9 and a transmitter/receiver 10. Rather, the transmitter/receiver 10 sends data downstream to the terminals 7, 8 and 9 during a vertical blanking period in the video broadcast. In another embodiment, the transmitter/receiver 10 sends data downstream on a separate data channel. See Col. 4, lines 36-58 of Smith.

The interactive terminals 7, 9 and 9 in Smith, on the other hand, communicate upstream to the transmitter/receiver 1- with a separate data channel at 25 MHz or a separate telephone line. See Col. 4, lines 36-58 of Smith.

As explained in the background portion of Appellant's patent application, cable video channels are transmitted in the 50 to 750 MHz range, while telephone and other two-communications occur in the 5-42 MHz range. Smith teaches using a well known non-video channel operating at 25 MHz for upstream communications from the in-room terminals 7, 8 and 9 to transmitter/receiver 10.

Thus, while one may construe Smith to teach the downstream sending of signals from the transmitter/receiver 10 to the terminals 7, 8, and 9 over a video signal; Smith fails to teach receiving information from the terminals over a video signal. That is, the transmission of information over the video signal in Smith is

one way – downstream. Transmission of upstream signals occurs over a non-video channel operating at 25 MHz.

Thus, neither Smith nor Freadman, even when combined, teach the both sending and receiving computer-to-computer communications within filtered out portion of video in the range of approximately 50 MHz and approximately 750 MHz.

Sanders describes a system that identifies the source of external noise in a bi-directional cable system. Sanders, however, does not describe computer networking within a filtered range of video signals.

Thus, none of the cited references, either alone or in combination teach a unique local area network of computers that both send and receive data within one or more filtered bands of video signals.

b) A Novel Notch Filter That Filters Both Incoming Signals and Outgoing Signals

The notch filter of Claim 6 has a first port that receives video signals and a second port that that receives transmissions from a local area network. The notch filter filters certain bands of video signals from coming into a building while also filtering local area network communications from exiting the building.

In particular, a notch filter in communication with a wire, filters out a portion of a signal in the range of approximately 50 MHz to approximately 750 MHz to produce a filtered signal.

Although the local area network is in communication with the second port of the notch filter, the notch filter allows the local area network transmissions to occur over the wire cable within the residence while filtering the transmissions from leaving the residence, such that the local area network communications are not transmitted out of the residence.

In contrast, neither Freadman, Smith, nor Sanders, either alone or in combination describe such a notch filter that filters both incoming video signals and outgoing local area network signals. While Sanders describes filtering signals to prevent the upstream transmission of signals, no teaching exists whatsoever to adapt the filter in Sanders to be a two-way filter.

Also, even if one were to take the circuit described in Sanders and add it the combination of references described by the other cited references, the combination would not achieve the two-way filtering as set forth in Claim 1. Rather, Sanders would only provide a one-way filter that blocks upstream communications.

Thus, the cited references fail to teach the concept of a notch filter with first and second ports that performs the downstream filtering of a signal in the range of approximately 50 MHz to approximately 750 MHz and upstream filtering of local area network signals within the filtered portion.

c) A Novel Notch Filter That Allows Transmission of Local Area Network Signals

The notch filter in Claim 1 does three things: 1) it filters a portion of incoming signals within approximately 50 MHz to approximately 750 MHz, 2) it filters outgoing local area network signals, while 3) allowing the transmission of the local area network signals within the residence. Thus, the references need to teach a circuit that both filters incoming and outgoing signals while allowing the transmission of the signals within the filtered signal range to occur over a local area network. None of the cited references, however, teach this concept.

In contrast, none of the cited references describe the use of such a notch filter that allows the ongoing operation of the local area network in the very band of frequencies the notch filter has blocked from entering into the building. Still

further, none of the cited references describe a notch filter that filters such local area network transmission via a second port from leaving the building.

2. The Examiner Has Not Presented a Prima Facie Case of Obviousness

The case, KSR International Co. v. Teleflex Inc., 127 S.Ct. 1727, 82 U.S.P.Q.2d 1385 (2007), in no way relieves the Patent Office of its obligation to "consider ***all claim limitations*** when determining patentability of an invention over the prior art." In re Lowry, 32 F.3d 1579, 1582 (Fed. Cir. 1994) (emphasis added). Accordingly, it remains well settled law that a finding of "obviousness requires a suggestion of ***all limitations in a claim***." CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (emphasis added) (cited in Ex Parte Wada, 2008 WL 142652, *4 (Bd.Pat.App. & Interf., Jan. 14, 2008)).

In the aftermath of KSR, the Board of Patent Appeals and Interferences has repeatedly reversed findings of obviousness when the Examiner has failed to proffer a prima facie case of obviousness. See, e.g., Wada, 2008 WL 142652 at *5 ("Because the Examiner has not explained why ***every limitation*** in claim 1 would have been obvious to a person of ordinary skill in the art, we agree with Appellants that the Examiner has not made out a case of prima facie obviousness.") (emphasis added); Ex Parte Challapali, 2008 WL 111346, *4-6 (Bd.Pat.App. & Interf., Jan. 10, 2008) (reversing finding of obviousness because the Examiner failed to establish sufficient reasoning for combining the references).

In view of the arguments set forth herein, Appellant submits that Claim 1 is patentable over the cited references based on at least the following elements:

a) computers that both send and receive data within one or more filtered bands of video signals;

b) a novel notch filter with two ports that not only filters out video signals from entering into a building, but also filters out local area network

communications between different computers from leaving the building; and

c) a novel notch filter that that allows transmission of local area network signals.

Thus, in order to establish a prima facie case of obviousness for the pending claims, the Examiner must present, inter alia, references that when combined have each and every claim limitation. However, none of cited references even when combined suggests such limitations. Thus, Appellant respectfully contends that the Examiner has failed to provide adequate articulation of reasoning to support the legal conclusion of obviousness.

Accordingly, Applicant respectfully requests allowance of Claim 1.

3. Dependent Claims 7-9 and 12

Claims 7-9 and 12 depend from independent Claim 6 and are not obvious over the cited references for at least the same reasons as provided above for Claim 6.

C. Rejection of Claims 13-33 and 42-51 under 35 U.S.C. §103(a)

The rejection of Claims 13-33 and 42-51 under 35 U.S.C. §103(a) as being unpatentable over Freadman, in view of Decker, and further in view of Sanders.

1. Claim 13 Is Patentable In Light of the Cited References

Claim 13 is directed to a method of making a local area network and differs from the cited references for at least the following reasons:

a) configuring computer devices for two-way communications within filtered out bands of television broadcasts;

b) coupling a first port of a novel notch filter port to wiring in a structure, the novel notch filtering not only filters out video signals from

entering into a building, but also filters out local area network communications between different computers from leaving the building; and

c) coupling a second port of the novel notch filter to a plurality of computer devices.

Each of these differences is discussed in greater detail below.

a) Configuring Computer Devices For Two-way Communications Within Filtered Out Bands of Television Broadcasts

Claim 13 is directed to a method of making a local area computer network that comprises coupling a notch filter to a wire in a structure. More particularly, as illustrated in Figure 3, a notch filter 40 is connected to wiring 16 that transmits television signals to locations within a structure 14. The notch filter 40 filters out one or more frequencies associated with one or more television broadcast.

Computing devices 44, 46, and 48 within the structure send and receive two-way communications within the filtered out bands of television broadcasts.

Thus, the wire is used for two purposes – 1) to transmit non-filtered television broadcasts and 2) to send and receive two-way computer-to-computer communications within the filtered out bands of television broadcasts.

None of the references, in contrast, teach sending and receiving two-way computer communications over filtered out bands of television broadcasts.

The Examiner states that Freadman teaches this concept at Col. 3, lines 36-48 and Col. 4, lines 22-30. Appellant, however, respectfully disagrees.

Rather, Freadman only substitutes one video channel for another, by filtering out a video channel and then substituting in a video channel generated by a user's computer. Thus, the computer in Freadman simply broadcasts video data in one direction – downstream to the television set or another computer.

So how does a user control the computer that broadcasts the video on the filtered channel? A user uses a separate RF pointer or keyboard to control the computer.

That is, in Freadman, the broadcast computer that broadcasts the video does not receive signals from the television set or from another computer over the filtered channel. Any communications received from the television set are sent to the broadcast computer on a separate data link.

Therefore, Freadman fails to teach sending and receiving two-way computer-to-computer communications over filtered out bands of television broadcasts. Accordingly, Freadman fails to teach the use of a local area network of computers that both send and receive signals within a filtered out frequency within the filtered band of television broadcasts.

Decker describes a hotel entertainment system that uses notch filters to filter out channels 2, 3 and 4 so that the hotel can broadcast desired information on these channels. A device in each hotel room then displays the desired hotel information on an in-room television set. When a user makes an entertainment selection, the device in the hotel room communicates with a system controller via a telephone connection.

That is, the devices in each hotel room do not communicate with each other or a central controller using the band of filtered video signals. Rather, they communicate with separate telephone lines.

Like Freadman, Decker does not transmit two-way computer communications over a filtered band of television broadcasts. Indeed, Decker doesn't send any computer-to-computer messages over a filtered out band of a television broadcast.

Sanders describes a system that identifies the source of external noise in a bi-directional cable system. Sanders, however, does not describe computer networking within a filtered range of video signals.

Thus, none of the cited references, either alone or in combination teach a unique local area network of computers that both send and receive data within one or more filtered out bands of television broadcasts.

b) A Novel Notch Filter That Filters Both Incoming Signals and Outgoing Signals

The notch filter of Claim 13 has a first port that receives video signals and a second port that that receives transmissions from a local area network. The notch filter filters certain bands of video signals from coming into structure while also filtering local area network communications from exiting the structure.

In particular, a notch filter in communication with a wire, filters out one or more bands of frequencies associated with one or more television broadcasts.

Although the local area network is in communication with the second port of the notch filter, the notch filter allows the local area network transmissions to occur over the wire cable within the residence while filtering the transmissions from leaving the residence, such that the local area network communications are not transmitted out of the residence.

In contrast, neither Freadman, Decker, nor Sanders, either alone or in combination describe such a notch filter that filters both incoming television broadcasts and outgoing local area network signals. While Sanders describes filtering signals to prevent the upstream transmission of signals, no teaching exists whatsoever to adapt the filter in Sanders to be a two-way filter.

Also, even if one were to take the circuit described in Sanders and add it the combination of references described by the other cited references, the

combination would not achieve the two-way filtering as set forth in Claim 1. Rather, Sanders would only provide a one-way filter that blocks upstream communications.

Thus, the cited references fail to teach the concept of a notch filter with first and second ports that performs the downstream filtering of a band of television broadcast and upstream filtering of local area network signals within the filtered portion.

c) A Novel Notch Filter That Allows Transmission of Local Area Network Signals

The notch filter in Claim 13 does three things: 1) it filters one or bands of frequencies within one or more bands of television broadcasts, 2) it filters outgoing local area network signals, while 3) allowing the transmission of the local area network signals within the structure. Thus, the references need to teach a method that both filters incoming and outgoing signals while allowing the transmission of the signals within the filtered signal range to occur over a local area network. None of the cited references, however, teach this concept.

In contrast, none of the cited references describe the use of such a notch filter that allows the ongoing operation of the local area network in the very band of television broadcasts the notch filter has blocked from entering into the building. Still further, none of the cited references describe a notch filter that filters such local area network transmission via a second port from leaving the building.

2. The Examiner Has Not Presented a Prima Facie Case of Obviousness

The case, KSR International Co. v. Teleflex Inc., 127 S.Ct. 1727, 82 U.S.P.Q.2d 1385 (2007), in no way relieves the Patent Office of its obligation to "consider ***all claim limitations*** when determining patentability of an invention over the prior art." In re Lowry, 32 F.3d 1579, 1582 (Fed. Cir. 1994) (emphasis

added). Accordingly, it remains well settled law that a finding of "obviousness requires a suggestion of ***all limitations in a claim***." CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (emphasis added) (cited in Ex Parte Wada, 2008 WL 142652, *4 (Bd.Pat.App. & Interf., Jan. 14, 2008)).

In the aftermath of KSR, the Board of Patent Appeals and Interferences has repeatedly reversed findings of obviousness when the Examiner has failed to proffer a prima facie case of obviousness. See, e.g., Wada, 2008 WL 142652 at *5 ("Because the Examiner has not explained why ***every limitation*** in claim 1 would have been obvious to a person of ordinary skill in the art, we agree with Appellants that the Examiner has not made out a case of prima facie obviousness.") (emphasis added); Ex Parte Challapali, 2008 WL 111346, *4-6 (Bd.Pat.App. & Interf., Jan. 10, 2008) (reversing finding of obviousness because the Examiner failed to establish sufficient reasoning for combining the references).

In view of the arguments set forth herein, Appellant submits that Claim 1 is patentable over the cited references based on at least the following elements:

a) configuring computer devices for two-way communications within filtered out bands of television broadcasts;

b) coupling a first port of a novel notch filter port to wiring in a structure, the novel notch filtering not only filters out video signals from entering into a building, but also filters out local area network communications between different computers from leaving the building; and

c) coupling a second port of the novel notch filter to a plurality of computer devices.

Thus, in order to establish a prima facie case of obviousness for the pending claims, the Examiner must present, inter alia, references that when combined

have each and every claim limitation. However, none of cited references even when combined suggests such limitations. Thus, Appellant respectfully contends that the Examiner has failed to provide adequate articulation of reasoning to support the legal conclusion of obviousness.

Accordingly, Applicant respectfully requests allowance of Claim 1.

4. Dependent Claims 14-33 and 42-51

Claims 14-19 depend from independent Claim 13 and are not obvious over the cited references for at least the same reasons as provided above for Claim 13.

5. Independent Claim 20

Although the language in independent Claim 20 varies from the language in Claim 13, Claim 20 is believed to be patentable for the same or similar reasons as provided above for Claim 13.

6. Dependent Claims 21-33

Claims 21-33 depend from independent Claim 20 and are not obvious over the cited references for at least the same reasons as provided above for Claim 20 and Claim 13.

7. Independent Claim 42

Although the language in independent Claim 42 varies from the language in Claim 9, Claim 42 is believed to be patentable for the same or similar reasons as provided above for Claim 9.

8. Dependent Claims 43-51

Claims 43-51 depend from independent Claim 42 and are not obvious over the cited references for at least the same reasons as provided above for Claim 42 and Claim 9.

D. Rejection Of Claims 34, 35 And 38-41 Under 35 U.S.C. §103(a)

The Examiner rejected Claims 34, 35 and 38-41 under 35 U.S.C. §103(a) as being unpatentable over Freadman in view of Smith, in view of U.S. Patent No. 5,760,822 to Coutinho (hereinafter "Coutinho") and further in view of Sanders.

1. Independent Claim 34

Although the language in independent Claim 34 varies from the language in Claim 13, Claim 34 is believed to be patentable for the same or similar reasons as provided above for Claim 13.

2. Dependent Claims 35 and 38-41

Claims 35 and 38-41 depend from independent Claim 34 and are not obvious over the cited references for at least the same reasons as provided above for Claim 34 and Claim 13.

E. Rejection Of Claims 10 And 11 Under 35 U.S.C. §103(a)

The Examiner rejected Claims 10 and 11 under 35 U.S.C. §103(a) as being unpatentable over Freadman in view of Smith, in view of Sanders, as applied to Claim 9, and further in view of U.S. Patent No. 6,738,978 to Hendricks, et al. (hereinafter "Hendricks").

Appellant notes that Claims 10 and 11 depend from independent Claim 9 and are not obvious over the cited references for at least the same reasons as provided above for Claim 9.

F. Rejection Of Claims 36 And 37 Under 35 U.S.C. §103(a)

The rejection of Claims 36 and 37 under 35 U.S.C. §103(a) as being unpatentable over Freadman in view of Coutinho, and further in view of Sanders, as applied to Claim 34, and further in view of Hendricks.

Appellant notes that Claims 36 and 37 depend from independent Claim 34 and are not obvious over the cited references for at least the same reasons as provided above for Claim 34.

Conclusion

In view of the foregoing arguments distinguishing Claims 1-51 over the art of record, Appellant respectfully requests that the rejection of these claims be reversed. Also, although arguments have been made, no acquiescence or estoppel is or should be implied thereby.

Please charge any additional fees, including any fees for additional extensions of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

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VIII. CLAIMS APPENDIX

1. A network bus comprising:

a notch filter in communication with a coaxial cable, said coaxial cable routed in a tree configuration to a plurality of locations of a building, said notch filter comprising a first port in communication with an external source, said notch filter configured to filter out one or more bands of video signals received on said first port from an external source that are carried by said coaxial cable, wherein said notch filter further comprising a second port configured to receive via said coaxial cable, transmissions from a local area network of computers within said building, said transmissions occurring at one or more frequencies within said filtered out bands of video signals such that said transmissions from said local area network occur at one or more frequencies as said filtered out bands of video signals, and wherein said notch filter receives at said second port said transmissions over said coaxial cable within said building and allows said transmissions within said building while filtering said transmissions from being sent from said local area network to said external source; and

a frequency converter, in communication with said coaxial cable, configured to receive transmissions from said local area network of computers at at least a first frequency and to send said signals within said tree configuration to said local area network of computers at at least a second frequency, wherein said first and second frequencies are within said filtered out bands of video signals such that said local area network of computers can send and receive signals within said filtered out band of video signals on said coaxial cable in communication of said second port of

said notch filter while said notch filter blocks said transmissions on said local area network from exiting said building.

2. The network bus of Claim 1, wherein said frequency converter is configured to forward said signals via said coaxial cable.

3. The network bus of Claim 2, wherein said building comprises a residential building.

4. The network bus of Claim 1, wherein said video signals are delivered to said coaxial cable from a headend equipment of a community antenna television system.

5. The network bus of Claim 1, wherein said filtered out portion comprises a frequency range from approximately 50MHz to approximately 750MHz.

6. A local area computer network comprising:

a notch filter comprising a first port configured to receive a signal from a cable television transmission system and to filter out at least one portion of said signal in the range of approximately 50 MHz to approximately 750 MHz to produce a filtered signal;

a community antenna television wire configured to receive said filtered signal and routed in a tree configuration to a plurality of locations of a residence, said wire in communication with a second port of said notch filter;

a plurality of computers in communication with said wire, each of said computers having a modem configured to receive and transmit broadband signals between said computers within said tree configuration;

wherein said computers are configured to send and receive communications between different ones of said computers via said

modems by modulating a carrier having a frequency within said filtered out portion and wherein said notch filter receives said communications between said different ones of said computers at said second port and allows said communications to occur while filtering through said second port said communications between said computers from being transmitted out of said residence.

7. The local area network of Claim 6, wherein said computers are configured to send said upstream signals to said cable television transmission system using a carrier frequency in the range of approximately 0 MHz to approximately 50 MHz.

8. The local area network of Claim 7, wherein said modems are configured to receive a signal at a first frequency and to transmit said signal at a second frequency, wherein said first and second frequencies are within said filtered out portion.

9. The local area network of Claim 8, further comprising a frequency converter configured to convert signals from said first frequency to said second frequency.

10. The local area network of Claim 9, wherein at least some of said computers are configured to receive digital data from the Internet via said wire.

11. The local area network of Claim 9, wherein at least some of said computers are configured to receive FM audio signals via said wire.

12. The local area network of Claim 9, wherein at least one of said computers is configured to receive signals from said transmission system using a carrier frequency in the range of approximately 0 MHz to approximately 50 MHz.

13. A method of making a local area network, the method comprising:

routing community antenna television wiring in a tree configuration to different parts of a structure;

coupling a notch filter comprising a first port to said wiring for filtering out one or more bands of frequencies associated with one or more television broadcasts delivered to said wiring by a service drop of a community antenna television distribution system;

coupling to said notch filter via a second port a plurality of computing devices; and

configuring at least some of said computing devices for two-way communication with others of said computing devices, wherein the two-way communication is connected to said second port of said notch filter and occurs at least one frequency within said filtered out bands of television broadcasts such that said computing devices can send and receive signals within said filtered out bands of television broadcasts while connected to said second port and wherein said notch filter allows said transmissions over said wiring within said structure while filtering said communications between said computing devices from being transmitted out of said structure.

14. The method of Claim 13, wherein each of at least some of said computing devices comprises a receiver configured to receive video signals from said headend transmission equipment, a transmitter for forwarding signals to said headend transmission equipment, and a modem configured to receive and transmit broadband signals between said computing devices.

15. The method of Claim 13, wherein said computing devices comprise a computer and a microprocessor controlled appliance.

16. The method of Claim 15, wherein said computing devices comprise an alarm system.

17. The method of Claim 13, wherein said filtered out television broadcasts comprise a portion of the frequency range between approximately 50 MHz to 750 MHz.

18. The method of according to any of Claims 14-17, wherein said structure comprises a residential building.

19. The method of Claim 13, wherein at least some of said computing devices transmit communications at a first frequency and receive communications at a second frequency, wherein said first and second frequency are within said filtered out television broadcasts.

20. A method of networking computing devices, the method comprising:

coupling a notch filter comprising a first port to coaxial wiring carrying television signals, wherein the coaxial wiring is routed in a tree configuration to a plurality of locations in a building;

filtering out a frequency band comprising a portion of said television signals with the notch filter; and

establishing two-way communications between at least two computing devices within the building and connected via the tree configuration, wherein said two-way communications are coupled to a second port of said notch filter, wherein said communications are carried at least in part over said coaxial wiring utilizing said filtered out frequency band such that said computing devices can send and receive signals within said filtered out frequency band on said coaxial wiring while coupled to said second port, and wherein said notch filter allows said transmissions over said coaxial wiring within said building while filtering said communications

between said computing devices from being transmitted out of said building.

21. The method of Claim 20, wherein said building comprises a residential building.

22. The method of Claim 21, wherein said residential building comprises a plurality of rooms of a residence.

23. The method of Claim 22, wherein said television signals are delivered to said building via a service drop of a community antenna television system.

24. The method of Claim 20, wherein said frequency band spans the range from approximately 50MHz to approximately 750MHz.

25. The method of Claim 23, further comprising blocking at least some of said communications from being transmitted outside said local area network via said service drop.

26. The method of Claim 20, wherein at least some of said computing devices transmit said communications at a first frequency and receive said communications at a second frequency, wherein said first and second frequencies are in said frequency band.

27. The method of Claim 26, further comprising providing a frequency converter configured to receive said communications at said first frequency and to forward said communications at said second frequency.

28. The method of Claim 20, wherein one of the computing devices sends a communication to another of the computing devices at a first frequency, and wherein said another computing device receives said communication at a second frequency.

29. The method of Claim 23, wherein said computing devices comprise a network computer.

30. The method of Claim 23, wherein said computing devices comprise a microprocessor controlled appliance.

31. The method of Claim 23, wherein said computing devices comprises an alarm system.

32. The method of Claim 20, wherein said computing devices comprise a network computer and a microprocessor controlled appliance.

33. The method of Claim 23, wherein said computing devices comprise a network computer, a microprocessor controlled appliance, and an alarm system.

34. A network device comprising:

a receiver for receiving a television signal from a community antenna television system;

a transmitter for transmitting signals to a headend equipment of said community antenna television system;

a notch filter in communication with said television signal via a first port, said notch filter configured to block at least one stop frequency band within the received television signal; and

a modem in communication with a second port of said notch filter, said modem configured to receive and transmit broadband signals between computing devices within the at least one stop band and wherein the notch filter is configured to allow transmission of said broadband signals between said computing devices while blocking the transmission of said broadband signals between said computing devices from being sent to the headend equipment at least within the at least one stop band.

35. The network device of Claim 34, wherein said modem is configured to receive signals at a first frequency and to transmit said signals at a second frequency.

36. The network device of Claim 34, wherein said receiver is configured to receive digital data from the Internet.

37. The network device of Claim 34, wherein said receiver is configured to receive FM audio signals.

38. The network device of Claim 34, wherein said receiver is configured to receive signals in the range of approximately 50 to 750 MHz.

39. The network device of Claim 34, wherein said network device comprises a microprocessor controlled appliance.

40. The network device of Claim 34, wherein said network device comprises a computer.

41. The network device of Claim 34, wherein said computing devices comprise a microprocessor controlled appliance and an alarm system.

42. A method of communicating data between computing devices comprising:

receiving a television signal from a headend transmission equipment of a cable television transmission system;

filtering out with a notch filter connected via a first port to said television signal to filter a portion of said television signal in the range of approximately 50 MHz to approximately 750 MHz to produce a filtered signal;

coupling said filtered signal to unlooped cable television wiring that is in communication with a second port of said notch filter;

coupling a plurality of computing devices to said cable television wiring, wherein each of at least some of said computing devices comprises a modem configured to receive and transmit broadband signals between said computing devices;

establishing communications, at least in part over said cable television wiring, between different ones of said computing devices via said modem using at least one frequency within said filtered out portion; and

allowing said communications over said cable television wiring between said different ones of said computing devices while filtering with said notch filter said communications between said computing devices so as to prevent transmission of said communications to said headend transmission equipment.

43. The method of Claim 42, wherein each of at least some of said computing devices comprises a receiver configured to receive signals from said headend transmission equipment and a transmitter for forwarding signals to said headend transmission equipment.

44. The method of Claim 42, further comprising forwarding a signal from at least one of said computing devices to said transmission system using a frequency in the range of approximately 0 MHz to approximately 50 MHz.

45. The method of Claim 42, wherein said wiring is routed in a tree configuration to a plurality of different locations of a residential building.

46. The method of Claim 42, wherein said wiring comprises coaxial cable.

47. The method of Claim 42, wherein said computing devices comprise a network computer.

48. The method of Claim 42, wherein said modem in configured to receive communications at a first frequency and to send communications at a second frequency.

49. The method of Claim 42, further comprising coupling a frequency converter to said wiring, wherein said frequency converter receives a communication at a first frequency and forwards said communication at a second frequency within said filtered out portion.

50. The method of Claim 42, wherein said computing devices comprise a personal computer.

51. The method of Claim 50, wherein said computing devices comprise a microprocessor controlled appliance.

IX. EVIDENCE APPENDIX

None.

X. RELATED PROCEEDINGS APPENDIX

None.

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